Based on data published by the National Marine Manufacturers Association, the Company believes that approximately 77 million Americans participate in boating activities and that its addressable market comprises those owners who enjoy traveling a considerable distance outside the range of terrestrial communications systems. Their boats are generally designed to provide overnight accommodations for extended periods and are usually 26 feet or longer. There are approximately two million households with powerboats and 900,000 with sailboats in this size category. The primary market requirements are concern with safety and the availability of a low-cost, lightweight, personally portable unit.

Recreational boaters typically use VHF radio and/or cellular telephone where tower-based systems are available. Some individuals rely on HF radio and a very small number employ Inmarsat services. Due to the significant geographic coverage and expense limitations of these alternatives, however, there are few viable communications alternatives available to outdoorsmen.

The Company estimates there are approximately 22 million American households whose members frequently engage in one or more of the following "back-country" activities: hunting; hiking; overnight camping; and backpacking. The Company believes that a portion of these households form an addressable market for the ORBCOMM System due to the frequency of their activities and the likelihood that they will travel outside the range of terrestrial communications.

Hybrid Messaging. The advent of corporate email systems and small, lightweight personal computers is creating a large body of users who want the convenience and flexibility to communicate information without being bound by wireline or the limits of wireless systems. The ORBCOMM System, due to its low-cost Subscriber Communicators and global availability, could serve as a gap-filler for end-users, and appeal to terrestrial wireless system operators currently offering such services in metropolitan areas. The ORBCOMM System could provide extended coverage with minimal investment in new infrastructure and could expand vertical market opportunities for terrestrial operators.

A recent industry report indicated that the volume of messages carried over the Internet is currently 300 billion per year, of which 70% are messages of 1,000 characters or less. It is estimated that 40% of U.S. territory will remain uncovered by terrestrial communications due to sparse population density. The Company therefore believes there is a potential niche market for email and personal messaging in addition to messaging used primarily for business or industrial reasons. The Company believes that companies that currently provide terrestrial wireless communications services may use the ORBCOMM System as a service area gap-filler and extend their networks to remote areas.

Marketing

Domestic. The exclusive right to market the ORBCOMM System in the United States is held by ORBCOMM USA. See "Relationships Among the ORBCOMM Parties." ORBCOMM USA has developed a comprehensive marketing plan that includes distribution, applications development, customer service and pricing strategies. The Company's overall goal is to penetrate rapidly specifically targeted markets to promote efficient use of system capacity. Currently, while offering commercial intermittent service, ORBCOMM USA is seeking to build an initial base of subscribers in the United States, and expand on its agreements with key channels of distribution. During the fully operational stage, the Company expects that ORBCOMM USA's sales and marketing staff will primarily support indirect channels of distribution.

ORBCOMM USA is in the process of negotiating and signing agreements with Resellers who purchase ORBCOMM System services directly from the Company and resell these services to end-users in a specific industry and/or market as part of a package that may include other products or services. ORBCOMM USA's relationship with a Reseller is governed by a reseller agreement that details each party's rights and responsibilities with respect to developing and maintaining customer relationships, as well as the cost of service to the Reseller. In soliciting customers, the Reseller "adds value" to the basic service offering by bundling related applications software, hardware or product packaging for its respective industry or market segment. Existing mobile data carriers are expected to offer ORBCOMM System services by taking advantage of the ORBCOMM System's "gap-filler" properties as well as its geolocation and acknowledgment

features. Such additional ORBCOMM partners are likely to come from such areas as paging, PCS, mobile data, cellular, and intelligent transportation systems.

In the United States, service pricing is based on many variables, including the availability and cost of substitute services, the cost of providing service and the nature of the user application. Pricing generally incorporates an initial registration charge, a recurring monthly charge for access to the ORBCOMM System and usage charges based on end-user activity. In charging for usage, the Company has developed a pricing structure in the United States that suits the usage patterns for the initial vertical markets addressed by the existing two satellite system. Prices for priority and other real time messaging will be developed as the full deployment of satellites in the ORBCOMM System occurs. It is likely that multiple pricing alternatives will be offered in the United States including peak/off-peak, volume discounts, and annual contract commitment options.

To date, ORBCOMM USA has signed 21 reseller agreements with the following companies:

Reseller(1)	Industries	Services Provided
Advanced Research Corporation	T	TR
Arinc, Inc.	M, T, R, C, E, G	ME, MO, TR
Boatracs, Inc.	M	ME, TR
Caribbean Satellite Services, Inc.	M	MO, TR
Corexco Consulting Services, Inc.	OG	ME, MO
Electronic Marine Services, Inc.	M	ME
Geotechnology Development, Inc.	T, C	MO, TR
GlobalKey, Inc.	G	ME
Globitrac, Inc.	I, A, OT	MO, TR
IWL Communications, Inc.	OG	ME, MO
Innovative Computing Corporation	T	ME, MO, TR
Leupold & Stevens, Inc., Stevens Water Monitoring Division	E, OD	ME, MO, TR
LoadLink, International	T, R	ME, MO, TR
MCQ Associates, Inc.	G	ME, MO, TR
Metocean Data Systems, Inc.	E, G, OT	ME, MO, TR
National Systems & Research Co., Inc.	G	ME, MO, TR
QUALCOMM, Incorporated	T	MO, TR
Smartboat, Inc.	M	ME, TR
The Sutron Corporation	E	MO
Transportation Communication Services, Inc.	T, C	ME, MO, TR
Winnet, Inc.	T, C	ME, MO, TR

(1) Reseller agreements generally have a term of one year, although the Company generally expects these agreements to be renewed on substantially the same terms as currently exist.

Key —

Industries		Services Provided
A = Agriculture	OG = Oil & Gas	ME = Messaging
C = Containers	OD = Outdoor	MO = Monitoring
E = Environment	R = Rail	TR = Tracking
G = Government	T = Trucking	
I = Industrial	OT = Other	
M = Marine		

International. The Company holds the exclusive right to market the ORBCOMM System outside the United States, and has licensed this right to ORBCOMM International. See "Relationships Among the ORBCOMM Parties." Provision of communication services using the ORBCOMM System outside the United States is expected to be achieved through International Licensees authorized by ORBCOMM International. ORBCOMM International is in the process of negotiating and signing agreements with International Licensees within various countries or regions of planned service outside of the United States.

The Company has a standard Service License Agreement for International Licensees, although there may be variations in the terms of specific agreements. The Service License Agreement authorizes, among other things, the exclusive access by the International Licensee to the ORBCOMM System satellites in a designated geographic area and permits the limited use of certain ORBCOMM proprietary technologies and intellectual property. While the Agreement contains specific obligations on both parties, it also contains express provisions that are intended to disclaim all system performance warranties and includes broad limitation of liability clauses. The Agreement will have a ten-year term, although it may be terminated earlier under certain conditions including in the event of a default.

International Licensees will be responsible for obtaining all necessary licenses and approvals for the use of the ORBCOMM System and the construction and operation of the Gateways in the designated territories. Accordingly, in selecting authorized International Licensees for a particular country, ORBCOMM International considers such factors as an International Licensee's: (i) reputation in the marketplace; (ii) existing distribution capabilities and infrastructure; (iii) financial condition and other resources; and (iv) ability to obtain the requisite local regulatory approvals. International Licensees will pay fees for access to the ORBCOMM System in their territory, including a monthly Satellite Usage Fee. The Satellite Usage Fee is calculated as the greater of a percentage of gross operating revenues and a data throughput fee, which percentage and dollar amount may be increased by the Company in accordance with the terms of the Agreement.

In conjunction with the execution of a Service License Agreement, an International Licensee will be required to purchase from ORBCOMM an ORBCOMM Gateway, which will include a specific number of Earth stations. In certain defined circumstances, an International Licensee may be permitted by the Company to share a Gateway with another International Licensee in an adjacent territory, thereby reducing the initial out-of-pocket start-up costs for an ORBCOMM System franchise. For example, ORBCOMM has executed a Ground Segment Facilities Use Agreement with ORBCOMM Canada Inc., pursuant to which ORBCOMM Canada is authorized for a fee to access and use the U.S. Gateway on a shared basis with ORBCOMM USA.

Retail pricing in international markets will be at the discretion of the International Licensees, and is expected to vary from country to country to reflect variations in economic conditions, the availability of substitute services, local customs, and government policy as required to be competitive with other services.

As of June 30, 1996, ORBCOMM International has signed 17 Memoranda of Understanding with potential International Licensees and is in active negotiations with six other potential International Licensees; taken together, these 23 potential International Licensees represent approximately 75 countries around the world. The Company intends to convert its existing Memoranda of Understanding into Service License Agreements during the next three to 18 months, although there can be no assurance the Company will be successful in each case. In addition, ORBCOMM International has signed a Service License Agreement with one International Licensee, ORBCOMM Canada Inc., which is controlled by Teleglobe and which has been given the exclusive right to market services using the ORBCOMM System in Canada.

System Architecture

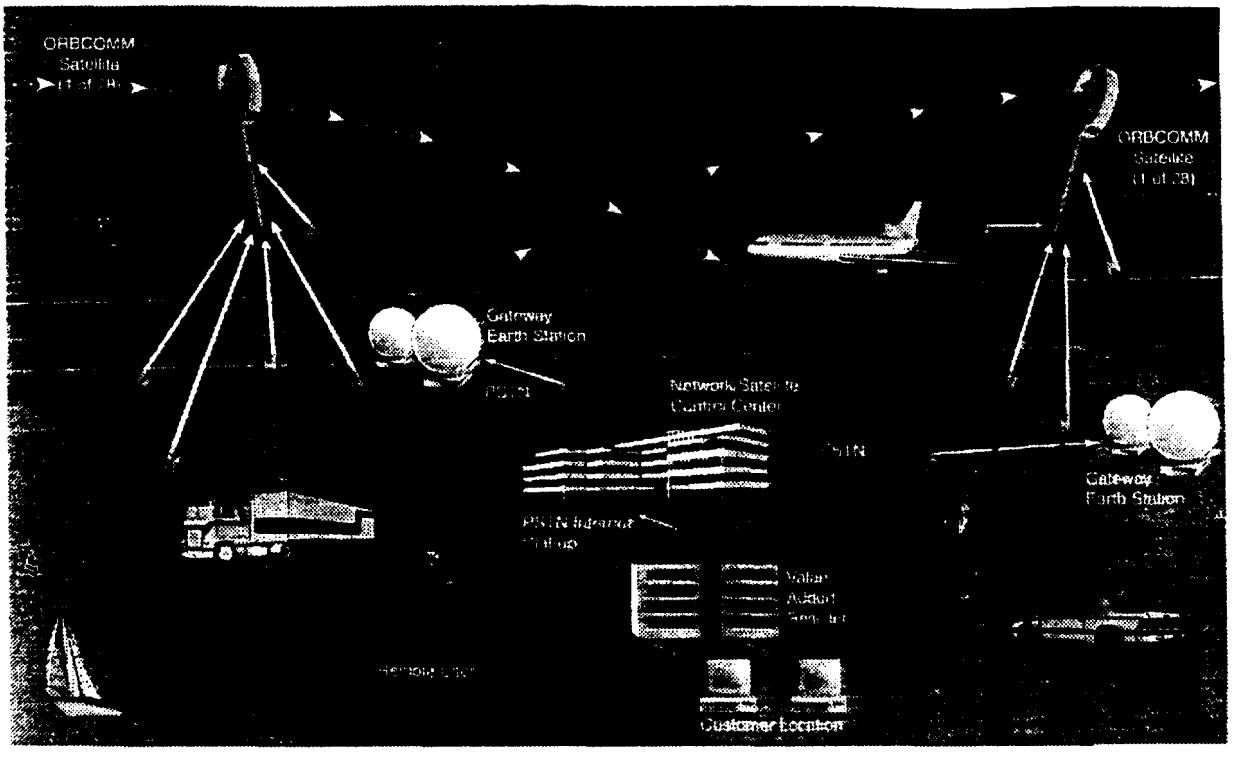
The ORBCOMM System consists of four operational segments: (i) a space segment consisting of a constellation of 28 LEO satellites; (ii) a ground segment consisting of Gateways, the major elements of which include Earth stations sending and receiving signals and a message switching system that processes the message traffic; (iii) a control segment to monitor and manage the flow of information through the system; and (iv) a subscriber segment consisting of communicators used by subscribers to transmit and receive messages to and from nearby satellites.

Overview. To use the ORBCOMM System, a user creates a text message using a computer or Subscriber Communicator device, which message is sent to the nearest ORBCOMM System satellite and delivered to an ORBCOMM Earth station, which supports communication with the satellites, and then to the Gateway Switching System, which processes the messages. Within the Gateway, the message is processed using a combination of ORBCOMM-developed and commercial email software, and sent on to its ultimate destination. If desired, an acknowledgement message is returned to the sender. The final delivery may be to

another Subscriber Communicator, or may make use of public/private X.25 data networks, the Internet, or even text-to-fax conversion.

To control costs and design and implementation risks, the ORBCOMM System architecture, where possible, makes use of existing, mature technologies and conforms to internationally accepted standards. The ORBCOMM System network architecture comprises a multi-nodal packet network using X.400 messaging and Time Division Multiple Access (TDMA) as the enabling technologies.

As shown below, the ORBCOMM System is divided into four operational segments: the space segment; the ground segment; the control segment; and the subscriber segment.



Space Segment. The Space Segment will consist of a constellation of 28 satellites comprising three planes of eight satellites and two planes of two satellites in highly inclined orbits (of which one plane of two satellites has been launched), all at approximately 775 kilometers above the Earth. The two in-orbit satellites are in a 70° inclined plane at an altitude of approximately 740 kilometers. Weighing approximately 95 pounds, the MicroStar satellites are produced by Orbital and generally will be deployed in groups of eight using Orbital's Pegasus XL launch vehicle. Two satellites are to be placed in a high-inclination orbit using an Orbital Taurus launch vehicle. The design of the remaining 26 satellites (as well as the eight ground spares) is expected to be identical.

The satellites, each of which is a self-contained node of the ORBCOMM System, are equipped with a VHF communications infrastructure capable of operation in the 137.0-150.05 MHz and the 400.075-400.125 MHz bands. The use of the spectrum is managed by an on-board computer that employs an ORBCOMM-developed Dynamic Channel Activity Assignment System ("DCAAS"). The DCAAS continuously scans the authorized spectrum, identifies frequencies in use and assigns channels to minimize the possibility of interference. DCAAS is expected to change the frequency of the uplink random access channels every five to 15 seconds. The ORBCOMM System satellites can also transmit a UHF beacon that provides Subscriber Communicator manufacturers with the ability to supply enhanced, low-cost, Doppler positioning.

Under the terms of the Procurement Agreement, the Company is purchasing an additional eight satellites that may be used as ground spares and launched in the event of the loss of satellites as a result of a launch failure or in-orbit satellite failure. In the event such satellites are not needed for such purpose, ORBCOMM

currently intends to launch these satellites as an additional plane of eight, as authorized by the FCC License. This would increase global coverage and provide additional system redundancy. In addition, the Company has an option to procure a second generation satellite system that would replace the system it is now deploying at the end of the system's expected life. The option, currently priced at $166.1 million (subject to adjustment for inflation and excluding taxes, if any, and the cost of launch and satellite insurance) can be exercised by the Company at any time.

The Procurement Agreement requires Orbital to demonstrate compliance with the detailed technical satellite performance requirements defined in the ORBCOMM System Specifications, which specifications describe the end-to-end satellite performance. Except for the communication software, which is the responsibility of ORBCOMM, Orbital is responsible for the performance of the satellites, the U.S. Earth stations and the satellite management functionality of the Network Operations Center ("NOC"). Orbital must comply with a verification and test plan, which defines the detailed verification tests and acceptance criteria for each of the ORBCOMM System elements.

The Procurement Agreement with Orbital provides for the launch of 24 satellites on the Pegasus XL. Orbital's Pegasus XL vehicle is launched from beneath Orbital's leased, modified Lockheed L-1011 and is capable of deploying satellites weighing up to 1,000 pounds into low-Earth orbit. Through June 30, 1996, Orbital has conducted a total of eight standard Pegasus missions, all of which were fully or partially successful. Whether a mission is fully or partially successful depends on the particular mission requirements designated by the customer. Prior to its first two successful flights in March and July 1996, the modified Pegasus XL, an enhanced version of the standard Pegasus, had two unsuccessful flights, one occurring in June 1994 and the other in June 1995. The first Pegasus XL failure was caused by inaccurate aerodynamic modeling of the vehicle. The second Pegasus XL failure resulted from human assembly error involving the improper installation of a small component that prevented the Stage 1/Stage 2 interstage from properly separating from Stage 2. After the Pegasus XL failure in June 1995, Orbital led a comprehensive internal review and commissioned an independent assessment of the Pegasus XL's design, manufacturing and assembly methods and launch procedures. Orbital also conducted extensive engineering analyses and subsystem testing to characterize flight margins and to implement appropriate design changes. All analyses and tests were conducted with broad customer input from NASA, the U.S. Air Force, the Ballistic Missile Defense Organization and the Aerospace Corporation. These reviews, carried out by members of the aerospace industry and government experts, recommended 88 engineering and procedural changes to enhance product robustness, all of which were implemented by Orbital. Pegasus XL returned to flight on March 8, 1996, successfully launching a satellite for the U.S. Air Force to its intended orbit and had a second successful flight on July 2, 1996, delivering a NASA satellite to its designated orbit.

In addition, the Company expects to launch two additional satellites as a secondary payload on Orbital's Taurus launch vehicle. Taurus is a four-stage, ground-launched derivative of Pegasus that can carry up to 3,000 pounds to low-Earth orbit. In March 1994, Orbital successfully launched the first Taurus vehicle, deploying two satellites for the Defense Advanced Research Projects Agency into their target orbits.

The ORBCOMM network is unique in that both the Ground Segment and the Subscriber Segment (described below) communicate with the satellite in the same band, thus eliminating the design complexity, as well as the associated mass, power and cost, of supporting multiple radio payloads on a single satellite. The satellite also contains an intelligent packet-routing capability, including a limited store-and-forward capability.

Ground Segment. The Ground Segment consists of Gateways strategically located throughout the world. The role of the Gateway is to provide access to the Space Segment and interface to public and private data networks. The major elements of a Gateway include:

- Earth stations, each of which is composed of two radomes, with enclosed VHF tracking antennae, one of which is redundant, associated pedestal, controller, and radio equipment;
- Gateway Message Switching System, which processes the message traffic and provides the interconnection to the terrestrial networks; and
- Gateway Management System, which manages the Gateway elements.

To provide services using the ORBCOMM System in a particular geographic region, an appropriately located Gateway is required. Substantially all elements of the U.S. Gateway have been constructed, including four Earth stations located in New York, Arizona, Georgia and Washington. ORBCOMM expects to enter into agreements with International Licensees for the construction of Gateways outside the United States. The cost and implementation of these Gateways is expected to be borne by the International Licensees.

Each Earth station comprises two radomes set on top of a sandwich-walled cinderblock support structure. The radome, which weighs approximately 3,300 pounds, is approximately 28 feet in diameter. The total height of the structure, measured from the top of the radome to the foot of the base, is approximately 33 feet. Each Earth station is unmanned, and contains a freestanding shelter and an optional fuel tank and power generator. The Gateway satellite links have been designed to make use of single uplink and downlink channels for all ORBCOMM System satellites by using a TDMA protocol. This protocol will permit several Gateways to communicate simultaneously with a single satellite. The TDMA protocol has several advantages, including the ability to provide a virtually seamless handover of a satellite from Earth station to Earth station under the centralized control of the NOC.

Control Segment. The Control Segment monitors and manages all network elements to ensure continuous, consistent operations in the provision of quality service. The Control Segment is housed at the NOC, with a back-up NOC planned to be constructed in the third quarter of 1997.

The Control Segment systems include a network management system that presents the status of all network elements and a space vehicle management system. Through the U.S. Gateway, managed from the NOC, ORBCOMM has access to the Space Segment for command and control purposes, although, consistent with the rules and regulations of the FCC, OCC maintains ultimate control over the ORBCOMM System.

Subscriber Segment. The Subscriber Segment consists of various models of Subscriber Communicators that are generally designed to support specific application needs of users. The Subscriber Communicator models will include: (i) vehicular-powered Subscriber Communicators that could be used in asset tracking, cargo monitoring, or vehicular operation monitoring; (ii) externally powered Subscriber Communicators for fixed applications such as pipeline monitoring, remote device control, or environmental monitoring; and (iii) self-contained, battery- and/or solar-powered Subscriber Communicators that would support applications where commercial or other external power is not available, including personal messaging applications.

Subscriber Communicators targeted for industrial or telemetric applications are designed to interface with sensors or control devices through an industry-standard serial interface using a proprietary communications protocol, developed to take advantage of the packet nature of the ORBCOMM System. Subscriber Communicators targeted for personal use will incorporate interfaces such as integrated keyboards or touch-sensitive screens. Additionally, while the ORBCOMM System satellites are designed to support Doppler position determination in the Subscriber Communicators, certain Subscriber Communicator models will also be equipped with GPS receivers, permitting more rapid and more accurate location determination.

To ensure the availability of Subscriber Communicators having different functional capabilities in sufficient quantities to meet demand, the Company has provided extensive design specifications and technical and engineering support to various Subscriber Communicator manufacturers. The Company currently has a development and initial supply agreement with Panasonic, which has received authorization from the Company for a basic Subscriber Communicator and has units that are now commercially available. The Company is in the process of finalizing a manufacturing and a sales support agreement with Panasonic and has executed Subscriber Communicator Manufacturing Agreements, which include terms regarding the development, manufacture and sales support for Subscriber Communicators, with Scientific-Atlanta, Magellan, Torrey Science and Stellar. Panasonic and Stellar have informed the Company that, in lots of at least several thousand, the price for their respective Subscriber Communicators will be approximately $550 per unit.

Competition

Competition in the communications industry is intense, fueled by rapid and continuous technological advances and alliances between industry participants seeking to use such advances on an international scale to

capture significant market share. At this time, the ORBCOMM System is the only commercial Little LEO system to be licensed fully for all segments of its system within the United States. ORBCOMM inaugurated commercial service on February 1, 1996, becoming the first commercial Little LEO mobile satellite service provider. The Company believes that commencement of commercial service provides it with a substantial head start in developing markets, distribution systems, applications and customers globally. The Company expects that potential competitors will include other Little LEO systems, such as Starsys, and Big LEO systems, such as the Iridium and Globalstar systems.

Starsys is licensed to construct and operate a multiple-satellite constellation that, if deployed, could compete directly with the ORBCOMM System. Starsys employs code division multiple access ("CDMA") modulation (spread spectrum) that must operate in spectrum that is allocated on both a "primary" and "secondary" basis to Little LEO services. As a result, Starsys will operate at low power levels to avoid interference to other services. The low power levels result in a maximum transmission rate of 600 bps from Subscriber Communicators compared with 2,400 bps for the ORBCOMM System. In addition, the U.S. Government has imposed a channel occupancy limit on Starsys of 25% of that permitted for the ORBCOMM System to prevent interference to existing U.S. Government systems. The Company believes that no operational Starsys satellites will be launched until 1997 at the earliest, and that completion of the network will not be accomplished before 2000.

One other entity has been licensed by the FCC in the first processing round to provide Little LEO satellite services in the United States. Volunteers in Technical Assistance ("VITA"), a not-for-profit organization, has been licensed for one of the two satellites for which it applied. VITA will use a small amount of uplink and downlink spectrum to transmit health, research and scientific data on a delayed basis between developing countries and the United States. VITA's first satellite was destroyed in 1995 as a result of a launch vehicle failure. VITA has requested that the FCC authorize it to launch a replacement satellite. It is expected that the FCC will authorize VITA to launch a replacement satellite and will grant VITA's second satellite application in its second processing round for Little LEO applications. See "Regulation — United States FCC Regulation."

The Company does not expect that any of the other proposed Little LEO systems currently participating in the second licensing round before the FCC will be in a position to offer competing data and messaging communications services before the year 2000. Even if the FCC were to license one or more of these other applicants in the near future, the Company holds a substantial advantage over these potential competitors by virtue of its having already obtained FCC licensing for all elements of its system in the United States, by achieving, in large part, international coordination of its designated frequencies through the ITU, and having already designed, constructed and deployed a fully functional, end-to-end system. Over the course of the next several years, the Company is expected to obtain further advantages over these potential competitors by launching the remaining satellites in the ORBCOMM System, by signing agreements with additional Subscriber Communicator manufacturers, by signing reseller and Service License Agreements with additional marketing entities and by expanding its marketing activities generally as the ORBCOMM System matures.

Plans for Little LEO systems have been announced in Russia, France, Tonga, Brazil, Uganda, Australia and Korea. However, with the sole exception of the French candidate system, the ORBCOMM System and those of the other United States first round licensees are expected to occupy all but a small portion of the currently allocated spectrum and are protected from harmful interference from all other systems.

The Big LEO systems, which will operate LEO mobile satellite systems using radio frequencies above 1 GHz, are not expected to be ready for real time, uninterrupted service before 1998. In addition, all the Big LEO systems are designed primarily to provide two-way voice services which require larger, more complex satellites than the ORBCOMM System satellites, and larger constellations to provide coverage. As a result, the cost of the Big LEO systems is significantly greater than those of the ORBCOMM System. Based on filings with the FCC, Iridium anticipates an initial service date in 1998 for a proposed 66-satellite constellation to provide voice and other communications services at usage charges of approximately $3.00 per minute plus tail charges (land-line extension charges). The total system cost is expected to be approximately $4.7 billion. The Globalstar system is expected to cost approximately $2 billion and consists of a constellation of 48

satellites with usage charges of approximately $0.55 per minute. The initial service date for the Globalstar system is anticipated to be in 1998. Another satellite system designed to provide primarily voice communications is the Odyssey system, a project in which Teleglobe has an interest. Odyssey is a medium-Earth orbit system, which will be composed of 12 satellites operating at an altitude of 10,355 kilometers above the Earth. Odyssey proposes to begin operations and to become fully operational by 2001. The total system cost is expected to be approximately $2.5 billion.

Satellite-based communications systems are characterized by high up-front costs and relatively low marginal costs of providing service. A number of Big LEO and Little LEO systems are presently being proposed, and while the proponents of these systems foresee substantial demand for the services they will provide, the actual level of demand will not become known until such systems are constructed, launched and begin operations. In addition, the ORBCOMM System will compete with several existing and planned GEO systems such as the AMSC system. Big LEO and GEO systems are designed primarily to provide two-way voice services, which require larger, more complex satellites and require a circuit-oriented connection over their network to transmit even short messages, which significantly increases their per-message cost for such short messages. However, these systems could seek to offer services similar to those offered by the ORBCOMM System. In such case, price competition could be intense.

The ORBCOMM System is not intended to compete with existing and planned terrestrial messaging and data systems. Rather, the Company believes that the ORBCOMM System will complement these systems, which provide low-cost services primarily in metropolitan areas where subscriber densities justify construction of radio towers. Such systems generally do not have sufficient coverage outside metropolitan areas, making them less attractive to vertical markets such as field service operations and trucking, where assets spend large portions of their operating time outside terrestrial system coverage areas. The ORBCOMM System presents an attractive complement to tower-based services because it can provide geographic gap-filler service at affordable costs without the need for additional infrastructure investment.

It is expected that as terrestrial communications services expand to regions currently underserved or not served by wireline or cellular services, demand for ORBCOMM System service in these regions may be reduced. ORBCOMM may also face competition in the future from companies using new technologies and new satellite systems. A number of these new technologies, even if they are not ultimately successful, could have an adverse effect on ORBCOMM as a result of their initial marketing efforts. ORBCOMM's business would be adversely affected if competitors begin operations or existing or new communications service providers penetrate ORBCOMM's target markets before completion of the ORBCOMM System. Additionally, as with any satellite-based system, the ORBCOMM System will function best when there is an unobstructed line-of-sight between the user and one or more of the ORBCOMM System satellites overhead, and services will not be available inside buildings or other similar structures. There can be no assurance that these characteristics will not adversely affect subscriber demand for the ORBCOMM System.

Employees

As of June 30, 1996, ORBCOMM had 69 full-time employees, none of whom is subject to any collective bargaining agreement. The Company's management considers its relations with employees to be good.

Properties

The Company currently leases approximately 23,000 square feet of office space in Dulles, Virginia from Orbital. See "Relationships Among the ORBCOMM Parties — Administrative Services Agreement." The Company currently operates four Earth stations. The Company owns the properties on which the St. Johns, Arizona and Arcade, New York Earth stations are located and leases, subject to long-term lease agreements, the properties on which the Ocilla, Georgia and East Wenatchee, Washington Earth stations are located.

Legal Proceedings

The Issuers are not a party to any pending legal proceedings material to their financial condition or results of operations. For a discussion of regulatory issues affecting the Company, see "Regulation."

REGULATION

United States FCC Regulation

Regulation of NVNG Systems

All commercial non-voice, non-geosynchronous ("NVNG") satellite systems, or Little LEO systems such as the ORBCOMM System, in the United States are subject to the regulatory authority of the FCC, which is the U.S. agency with jurisdiction over commercial uses of the radio spectrum. Little LEOs must obtain an authorization from the FCC to construct and launch their satellites and to operate their satellites to provide services in assigned spectrum segments.

In January 1993, the FCC allocated spectrum for NVNG mobile-satellite services ("MSS") and issued a Notice of Proposed Rulemaking to govern the NVNG application process. On October 21, 1993, the FCC formally adopted its rules pertaining to NVNG MSS systems. These rules included provisions regarding financial qualifications, system size, intersystem coordination and reporting requirements. These rules were applied to the three applications in the initial NVNG processing round. Each of these three applications (including OCC's) was approved by the FCC; however, the ORBCOMM System is the only commercial Little LEO System to be fully licensed for all segments of its system, including four Earth stations and its Subscriber Communicators, within the United States.

On November 16, 1994, the FCC closed the application filing period for a second processing round for NVNG applications, and the FCC has received applications from eight Little LEO systems (including OCC). The FCC has indicated that there is insufficient spectrum available to grant each of the pending applications, and therefore has suggested that its rules for processing NVNG applications may need to be modified. On May 3, 1996, the FCC issued a letter to all second round Little LEO system applicants indicating that by late spring or early summer of 1996 it would issue an order applying its existing NVNG rules to all second round applications, pending the issuance of a Notice of Proposed Rulemaking and the formulation of a strategy that would allow it to license applicants in the second round. See "— Second Processing Round."

Regulatory History of the ORBCOMM System

On February 28, 1990, nearly two years before the ITU allocated spectrum to NVNG systems, OCC filed an application with the FCC for a Little LEO system. See "International Regulation — ITU Spectrum Allocations." Starsys filed a Little LEO system application with the FCC several months later, whereupon the FCC established a cut-off date for the filing of applications to be considered concurrently with these proposals. A third applicant, VITA, also filed a Little LEO system application in this initial processing round.

On March 13, 1992 and May 28, 1993, the FCC awarded OCC experimental licenses to develop and test a limited Little LEO service. These licenses, plus other licenses previously granted to OCC, permitted the launch of two satellites, the construction of two ground stations and the development and production of 1,000 customer terminals and the marketing of revenue-producing services.

On October 20, 1994, OCC was granted authority by the FCC to construct, launch and operate an additional 34 satellites located 775 kilometers above Earth, in four inclined orbital and two near-polar planes, for the purpose of providing two-way data and message communications and position determination services in certain specified segments of the radio frequency spectrum (the "FCC License"). The FCC License grants OCC the authority to operate in certain segments of the radio frequency spectrum for its uplink and downlink functions. See "International Regulation — ITU Spectrum Allocation." The frequency bands in which the ORBCOMM System is authorized to operate are as follows:

Uplink:	148.0 - 149.9 MHz
Downlink:	137.0 - 138.0 MHz and 400.075 - 400.125 MHz

The FCC License is for private carriage and extends ten years from the operational date of the first ORBCOMM satellite, FM1, which was April 3, 1995. The milestone requirements of the FCC License mandate that OCC launch its first two satellites by December 1998 and its remaining 34 authorized satellites

by December 2000. OCC has already met the first milestone with the launch of its first two satellites, FM1 and FM2, in April 1995. OCC has set an aggressive launch schedule for 26 satellites that, if successful, will result in OCC reaching the second milestone by the end of 1997, subject to receipt of FCC approval by such date in the event ORBCOMM determines not to deploy the eight ground spares as a fourth plane. In addition, OCC is required, three years prior to the expiration of the FCC license, to apply for a license renewal. Although the FCC has indicated that it is inclined to grant license renewals to existing NVNG licensees, it is not certain that OCC's license would be renewed should it apply. See "Risk Factors — Regulatory Risks — Licensing Risks — Domestic."

At the time the FCC closed the first round of processing for NVNG applications, ORBCOMM's application was mutually exclusive with Starsys. In an effort to resolve this mutual exclusivity, the three first round applicants met and negotiated a Joint Sharing Agreement, executed on August 7, 1992. Using this Joint Sharing Agreement as a guide, the three first round applicants, the FCC, existing users of the same frequency bands and adjacent bands and other interested parties met as a Negotiated Rulemaking Committee to address and resolve operational and sharing concerns and to propose technical rules to resolve them. The final rules, based on the proposals of this committee, were adopted by the FCC and codified in its October 1993 NVNG order. OCC, as well as the other first round applicants, was permitted to modify its license application in response to the October 1993 NVNG order. See "— Regulation of NVNG Systems."

Under the terms of a coordination agreement between Starsys and OCC, which was incorporated into the terms of its FCC License, OCC is required to shut down its left-hand circular polarization ("LHCP") satellite-to-subscriber downlink channels under certain circumstances when operation of such channels would interfere with the Starsys system. To further lessen the possibility of co-polarization interference, OCC also agreed to modify its frequency plan to locate its LHCP channels in the lower portion of the 137.0-138.0 MHz band. The FCC imposed these restrictions on OCC's domestic operations but reserved the right to consider extending these restrictions to OCC's international operations if notified of actual sharing difficulties between the ORBCOMM System and Starsys.

The FCC License also provides that the ORBCOMM System is permitted to operate throughout the 148.0-149.9 MHz band until such time as Starsys is prepared to launch its first satellite. Once Starsys so notifies the FCC, or earlier if the FCC requires, OCC has agreed to limit its operations to the upper half of the 148.0-149.9 MHz band, permitting Starsys to operate its spread spectrum system in the lower half of the band.

In 1995, the FCC granted OCC licenses to operate four Earth stations in the continental United States and granted OCC a blanket license to deploy up to 200,000 Subscriber Communicators. Thus, the ORBCOMM System is the only commercial Little LEO system to be licensed fully for all segments of its system within the United States.

Request for Modification of FCC License

On October 20, 1995, OCC submitted to the FCC the Modification Request, proposing to reduce each of the ORBCOMM System satellites' subscriber downlinks operating in the 137-138 MHz band from two to one, while changing the downlink data rate to a selectable rate of either 4.8 or 9.6 kbps, which would reduce ORBCOMM's overall bandwidth requirements by 40 kHz. OCC also proposed to continue to operate at 4.8 kbps in high-inclination planes, and at 56 kbps in the gateway downlink on all satellites. Although several of the other second round applicants have filed comments with the FCC opposing the Modification Request, the Modification Request has several advantages for OCC's opponents, as well as OCC. The Modification Request would eliminate the need for OCC to shut down its LHCP when in view of a Starsys Earth station and thus obviate many of the restrictions imposed on the ORBCOMM System under the terms of the FCC License. The Modification Request also would free a certain portion of the allocated spectrum for use by other Little LEO applicants. The Modification Request would facilitate coordination of the ORBCOMM System with Russian meteorological satellites currently operating in this bandwidth and could facilitate OCC's coordination efforts with the proposed French S/80-1 satellite system. See "— International Regulation — ITU Coordination." The Modification Request has now completed the public comment cycle and OCC recently reached an agreement with Starsys and NOAA with respect to technical matters raised by the

Modification Request. While OCC believes that the Modification Request will be granted within the next several months, should the FCC fail to grant the Modification Request, it could have a material adverse effect on the ORBCOMM System.

Second Processing Round

On November 16, 1994, the FCC closed the application filing period for applications from other proposed NVNG satellite systems. Currently, there are eight NVNG applicants in the second processing round (including OCC), each of which proposes to operate in all or part of the same frequencies as the ORBCOMM System in the United States.

In its own second round application, OCC seeks authorization to construct 12 more satellites to improve its high-latitude coverage over Alaska, Canada and Europe as well as to provide additional capacity and greater in-orbit redundancy. This proposal would require the FCC to allocate an additional 90 kHz of spectrum in the 137-138 MHz downlink to OCC. OCC also has requested use of an additional 50 kHz in the 149.9-150.05 MHz band for a worldwide gateway uplink. This spectrum, while registered at the ITU, has not yet been allocated for use by Little LEO systems, and is currently occupied by U.S. and Russian military satellite downlinks. OCC anticipates that once this bandwidth is freed by the United States in 1997, it will be made available by the FCC for use by Little LEO systems, including the ORBCOMM System, subject to coordination with Russia.

Although the FCC has closed the second processing round for NVNG systems, it has not yet licensed any of the second round applicants. Prior to the World Radiocommunication Conference scheduled for November 1995 ("WRC-95"), the FCC noted that there was insufficient spectrum available to license all of the second round NVNG applicants, and declined to issue any additional Little LEO system licenses pending its request for additional spectrum for the Little LEOs at WRC-95. Significant additional spectrum was not allocated for use by NVNG services at WRC-95. The FCC has since issued a letter to all second round applicants indicating that it will issue a Notice of Proposed Rulemaking intended to establish rules that will allow it to complete the second round of processing for NVNG applications. See "— Regulation of NVNG Systems." The FCC anticipates that it will issue a final order on licensing rules before the end of 1996 and that it will proceed to licensing immediately thereafter. It is not clear whether the FCC will in fact grant any of the second round Little LEO applications or whether it will only grant selected applications. It is unlikely, however, that the FCC will grant all of the eight pending second round applications.

International Regulation

The ORBCOMM System operates in frequencies which were allocated on an international basis for use by Little LEO systems at the World Administrative Radio Conference held in 1992 ("WARC-92"). The United States, on behalf of various Little LEO service providers, including OCC, pursued international allocations of additional frequencies for use of Little LEOs at WRC-95 with limited success, as described above. The United States likely will present a request for additional frequencies for use by the Little LEOs at WRC-97. See "— ITU Spectrum Allocations." In addition to cooperating with these efforts by the United States to secure additional spectrum for Little LEO systems, OCC is required to and has in fact, through the FCC, engaged in international coordination procedures with other countries with respect to other satellite systems under the aegis of the ITU. OCC also was required, through the FCC and the U.S. Department of State, to engage in economic and/or technical coordination with two international satellite systems, Intelsat and Inmarsat. These coordinations have been completed successfully. Finally, the ORBCOMM System must receive operational authority from each of the foreign countries in which it proposes to provide service. It will be the responsibility of the International Licensee in each country to obtain such authority.

ITU Spectrum Allocations

The ORBCOMM System operates both in the United States and internationally using frequencies allocated for Little LEO systems in the International Table of Frequency Allocations (the "International Table"). The International Table identifies radio frequency segments that have been designated for specific

radio services by the member nations of the ITU. The International Table is revised periodically at WRCs. Between WRCs, the member nations of the ITU, in connection with private industry, prepare and propose recommendations for international allocations to be considered at the next WRC. Preparatory analyses and recommendations are considered in appropriate technical study groups for specific topics.

Little LEO systems require use of radio spectrum on a global basis to reach their full commercial potential. At WARC-92, with the sponsorship of the U.S. government and a number of other key administrations, major portions of the 137 to 150 MHz band and a narrow portion of the spectrum band at 400 MHz were allocated on a global basis to Little LEO systems. The specific frequency allocations for uplink and downlink operations included the following:

Uplink:	148.0 - 149.9 MHz (1.9 MHz on a primary basis)
Downlink:	137.0 - 138.0 (675 kHz on a primary basis; 325 kHz on a secondary basis)
	400.15 - 401.00 MHz (850 kHz on a primary basis)

In addition, 3 MHz of uplink and 3 MHz of downlink frequencies were allocated on a secondary basis. The band 400.075 - 400.125 MHz licensed for use by the ORBCOMM System already was allocated previously on a global basis to Time and Frequency Standard service and, therefore, was not subject to consideration at WARC-92. The Company's planned use of this bandwidth complies with the regulations governing its use.

A designation of "primary" places the Little LEO systems on an equal footing with existing users of these frequencies, subject to the provision that they not interfere with those services or constrain their growth and, with respect to certain countries and certain frequency bands, that the Little LEO systems not claim protection from those other services. A "secondary" designation means that the other users of the same frequencies have priority over the Little LEO systems and are not required to accommodate or avoid interference with them. The procedures for "coordinating" Little LEO services with other registered users of the band were also established at WARC-92.

At WRC-95, the U.S. government and other administrations sought an additional allocation of 6.65 MHz of spectrum for Little LEO systems. This proposal was largely unsuccessful due to the late identification of candidate bands. Consideration of additional bandwidth allocations is currently scheduled to be on the agenda for the next WRC scheduled for November 1997.

ITU Coordination

The United States, on behalf of OCC, is required to coordinate the frequencies used by the ORBCOMM System through the ITU. ITU frequency coordination is a necessary prerequisite to obtaining interference protection from other NVNG satellite systems. There is no penalty for launching a satellite system prior to completion of the ITU coordination process, although protection from interference through this process is only afforded as of the date of successful completion of the process and notification of the satellite by the ITU.

The United States through the FCC, on behalf of OCC, notified the ITU that the ORBCOMM System was placed in service on April 3, 1995 and that it has operated without complaints of interference since that time. The FCC also informed the ITU that OCC has successfully completed its coordination with all other administrations except Russia and France. The Company believes that the Modification Request would facilitate its coordination efforts with Russia and could facilitate its coordination efforts with France. OCC expects that it will successfully complete the ITU coordination process with Russia this year and with France shortly thereafter, at which time the ORBCOMM System will be registered with the ITU and accorded protection from interference from any other subsequently developed system.

ITU coordination is also required for the uplink ground segment of the ORBCOMM System, but is the responsibility of individual administrations. Depending on the location of particular ground stations, the applicable coordination distance specified in the ITU procedures may extend across international boundaries and require coordination by more than one government authority. For example, two of the four U.S. Earth

stations have a coordination distance that extends into Canada, and thus require coordination with Canada prior to ITU notification or registration.

At WRC-95, France proposed a reduction in the threshold for coordination with terrestrial services, which would require additional coordination of mobile satellite systems. This proposed change was not adopted at WRC-95, but there can be no assurance that it will not be proposed and adopted at the next WRC scheduled for 1997, or that, if adopted, additional coordination requirements would not be imposed on the ORBCOMM System, to the extent that OCC may not have completed the ITU coordination process.

Coordination with Intelsat and Inmarsat

Pursuant to the Intelsat treaty, international satellite operators are required to demonstrate that they will not cause economic or technical harm to Intelsat. OCC was notified in March 1995 that this coordination with Intelsat has been completed successfully.

The Inmarsat treaty similarly requires both technical and economic harm coordination. OCC was notified in October 1995 that it had successfully completed both technical and economic coordination with Inmarsat.

Regulation of Service Providers

Primary responsibility for obtaining local regulatory approval to offer ORBCOMM System services in countries outside the United States will reside with the various International Licensees. In all but one case, South Korea, the proposed International Licensees are private companies, reflecting the expectation that the ORBCOMM System will be licensed as a value-added service rather than as a regulated basic service. The Company's proposed International Licensees have had discussions with regulators in the major target countries and have advised the Company that such discussions indicate that favorable regulatory treatment can be anticipated.

The process for obtaining operating approval in foreign countries generally conforms to the following process. The International Licensee requests operating authority from the appropriate national regulatory body, which has the sole authority to grant an operating license. Obtaining such local regulatory approvals normally requires, among other things, that the International Licensee demonstrate the absence of interference to other authorized uses of the spectrum in each country. In some countries, this process may take longer due to heavier shared use of the applicable frequencies and, in certain other countries, may require reassignment of some existing users. The national regulatory authority will be required to associate with the ORBCOMM ITU submission. The national regulatory authority also will be required to submit so-called Appendix 3 information to the ITU in order to coordinate and protect ORBCOMM's Earth stations in the territory or region from interference by other ground systems.

ORBCOMM International has to date executed one Service License Agreement with ORBCOMM Canada Inc., to provide service in Canada. The International Licensees or proposed International Licensees in Canada, Venezuela, Argentina, Chile, Japan and Morocco are in the process of seeking authority to operate. The Company has been advised by its proposed International Licensees that experimental or preliminary operating authority for the ORBCOMM System has been granted in Canada, Japan, Argentina, Italy, Venezuela and Colombia.

The Company provides technical and regulatory assistance to its proposed International Licensees in pursuing operating authority. The assistance provided by the Company includes actual in-country demonstrations that the ORBCOMM System can share use of the allocated spectrum with existing users while causing no harmful interference or constraining operations and growth of those systems. While International Licensees have been selected, in part, based upon their perceived qualifications to obtain the requisite foreign regulatory authorizations, there can be no assurance that they will be successful in doing so, and if they are not successful, service on the ORBCOMM System will not be available in such countries. In addition, the continued operations of the International Licensees may be subject to other regulatory requirements and changes in each foreign jurisdiction.

APPENDIX B

APPENDIX B

ANALYSIS OF SYSTEM CAPABILITIES

Little LEO Constellation Availability Analyses

Autometric, Inc. was tasked by LEO One USA to assess the world-wide downlink availability of 8 Little LEO constellations as defined in their most recent FCC license proposal filings. These included: CTA (15 Nov 94), ESAT (16 Nov 94), FACS (15 Nov 94 and latest amendment dated 23 Feb 96), GE American (16 Nov 94), LEO One (19 Nov 94, amendment dated Nov 94 and errata dated 14 Dec 94), ORBCOMM (21 Sep 90 and amendment dated 21 Dec 93), Starsys (25 Apr 94), and VITA (25 Apr 94).

Analysis Approach

Autometric's automated visualization tool, Omni, was used to conduct the analysis using LEO satellite system parameters contained in current FCC license proposals. This tool provides the means to visualize the results of complex simulations involving spatial relationships between user defined objects such as satellites. It allowed communication satellite system downlink availability to be determined with respect to latitude as illustrated in Figures 1 - 4. Omni provides highly accurate predictions of outage times based on a given date of constellation population. Constellation parameters used for each system are summarized in Table 1.

Figure 1. System Downlink Availability @ 10 deg Mask Angle

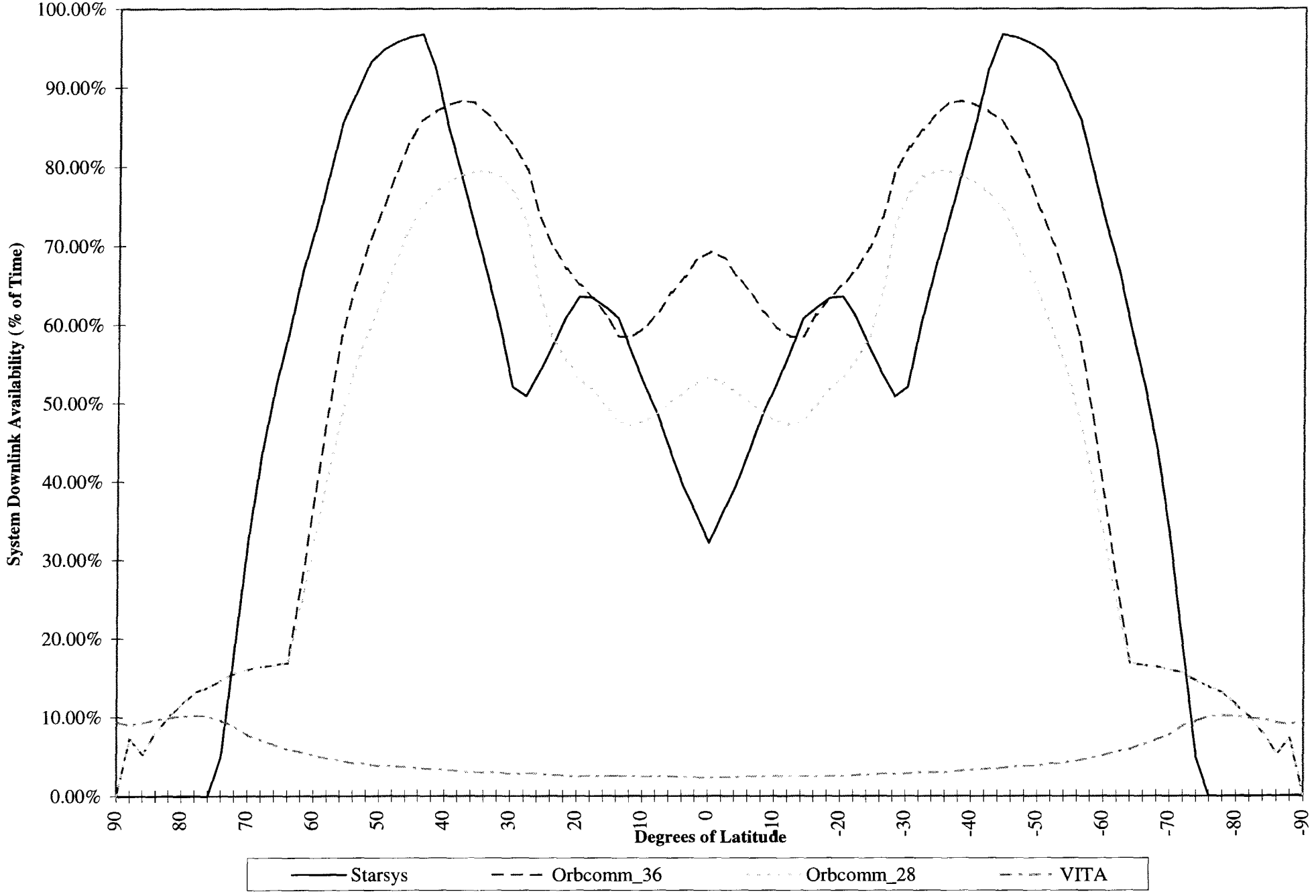


Figure 2. System Downlink Availability @ 15 deg Mask Angle

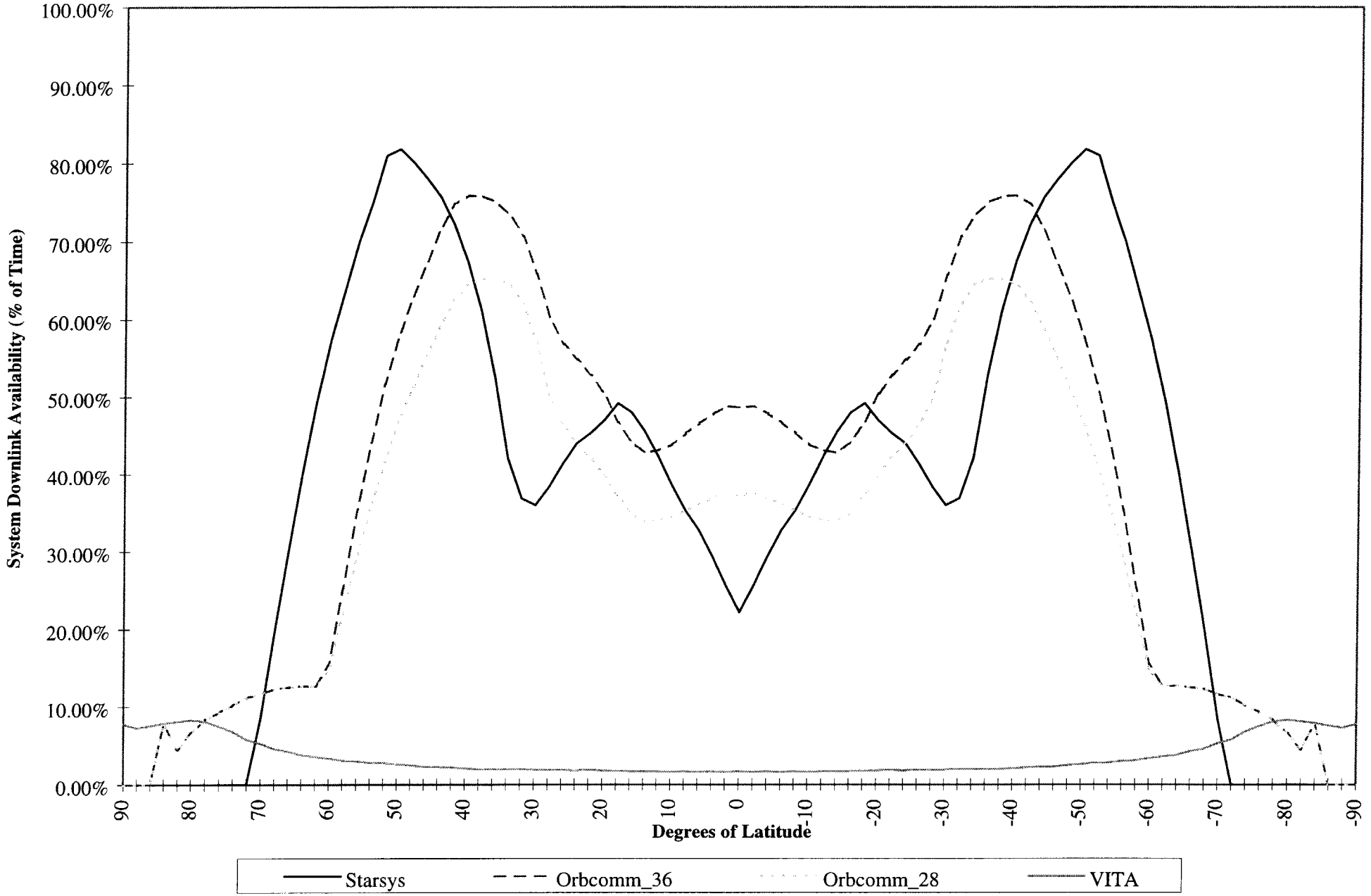


Figure 3. System Downlink Availability @ 10 deg Mask Angle

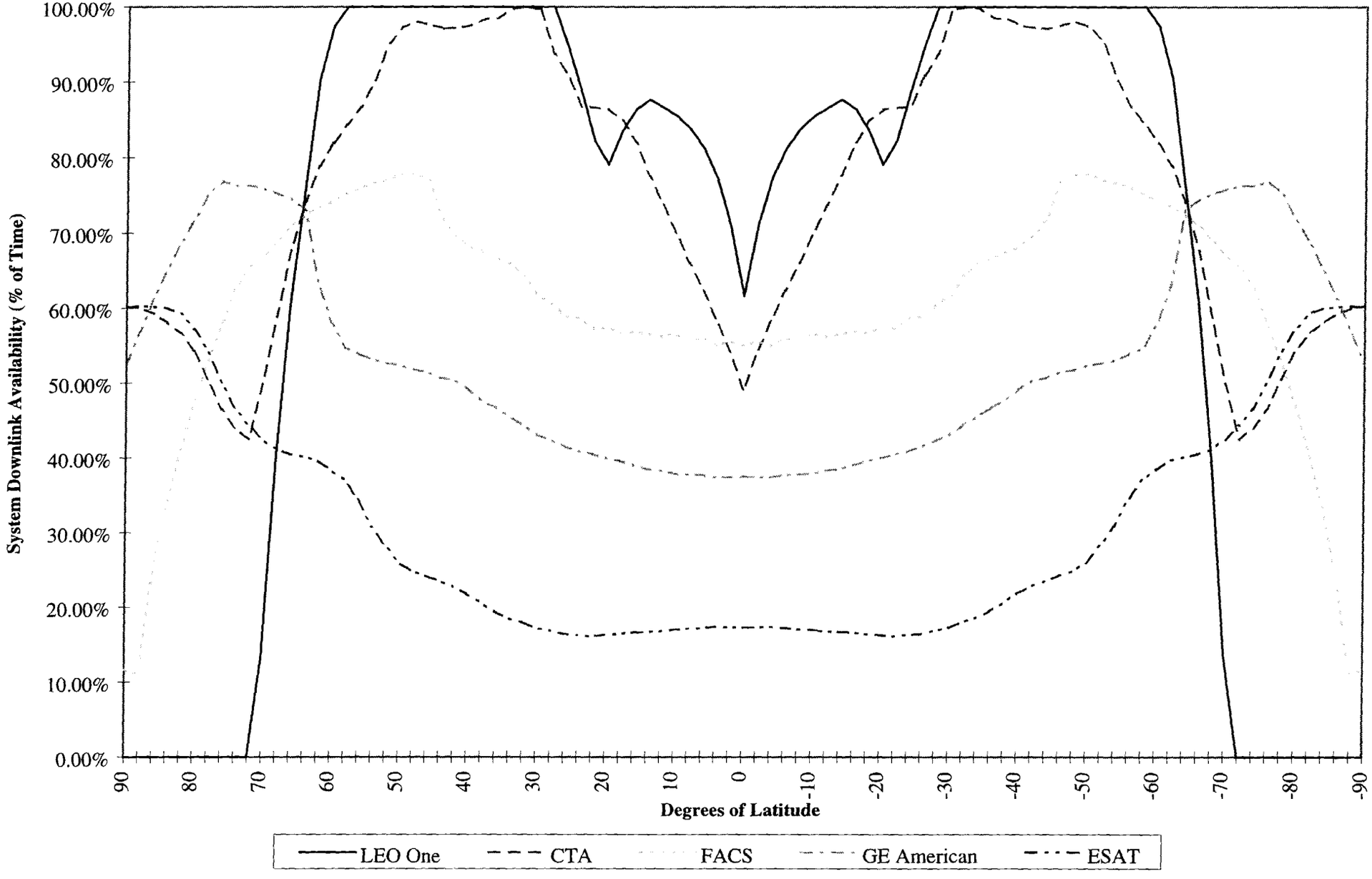
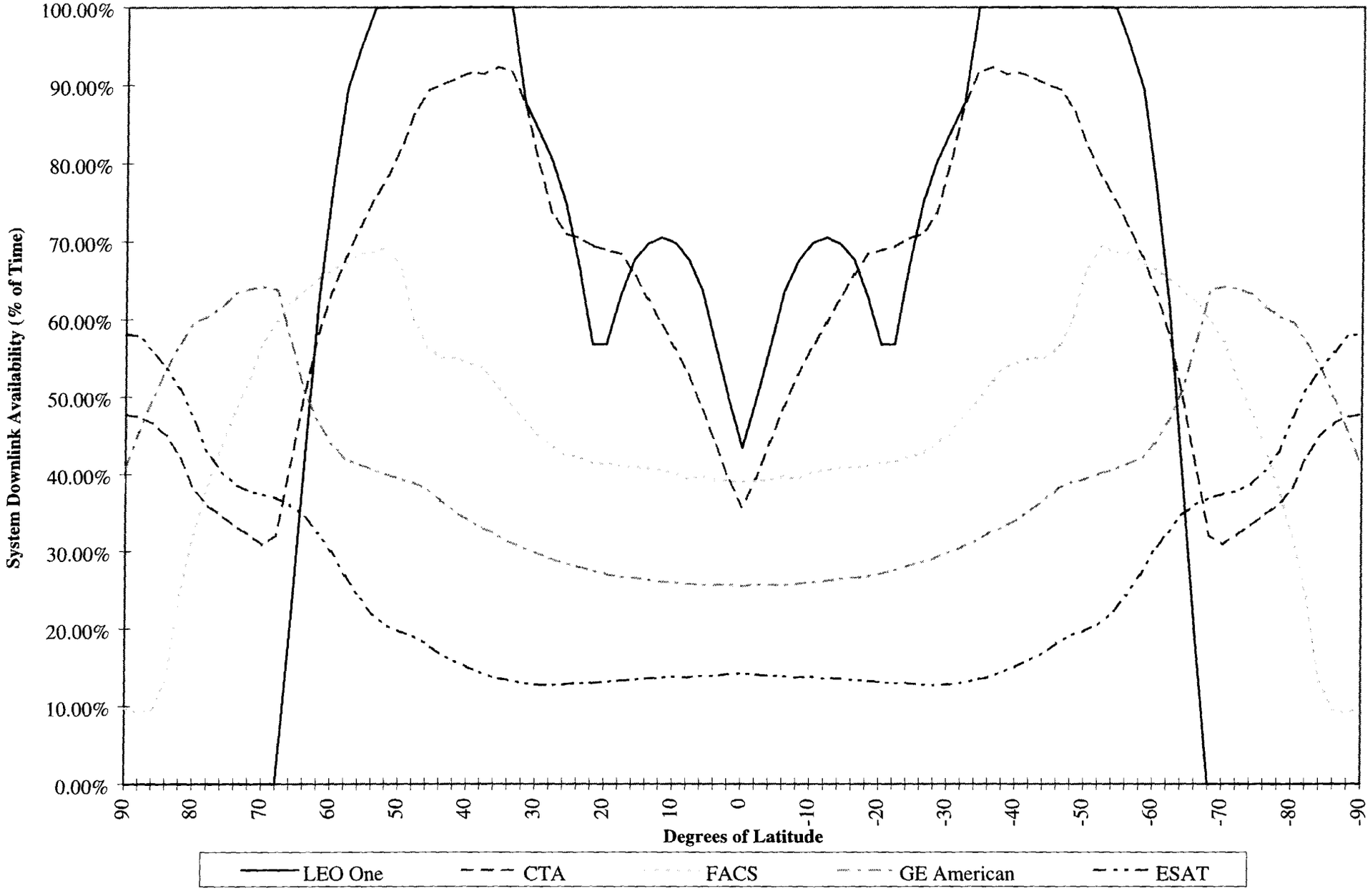


Figure 4. System Downlink Availability @ 15 deg Mask Angle



	CTA	ESAT	FACS	GE	LEO One	ORBCOMM	***ORBCOMM**	Starsys	VITA
Total # of SATs	38	6	26	24	48	28	***36***	24	2
Total # of Planes	5	1	6	4	8	5	***6***	6	2
Primary Plane									
# of Planes	4	1	4	4	8	3	***4***	6	2
SATs per Plane	8	6	6	6	6	8	8	4	1
Inclination (deg)	50	100.7	66	98	50	45	45	53	88
RAAN (deg)	0, 90, 180, 270	90	0, 45, 90, 135	0, 45, 90, 135	0,45, 90,135,180 ,225, 270,315	0,135, 270	0,135, 270, ***405***	0,60, 120,180, 240,300	0,90
Intra-Plane Sat Spacing (deg)	45	35	60	60	60	45	45	90	-
Inter-Plane Sat Spacing (deg)	45	-	0	0	0	0	0	0	-
Secondary Planes									
# of Planes	1	-	2	-	-	2	2	-	-
SATs per Plane	6	-	1	-	-	2	2	-	-
Inclination (deg)	99.481	-	83	-	-	70	70	-	-
RAAN (deg)	180	-	0,90	-	-	0,180	0,180	-	-
Intra-Plane Sat Spacing (deg)	60	-	-	-	-	180	180	-	-
Inter-Plane Sat Spacing (deg)	-	-	0	-	-	90	90	-	-
Eccentricity	0	0	0	0	0	0	0	0	0
Altitude (km)	1000	1262	1000	800	950	775	775	1000	667
Subscriber Downlink Rate (kbps)	19.2	2	19.2	2.4	24	4.8	4.8	2.4	38.4

Table 1
Little LEO Orbital Parameters and Constellation Design
(Taken from the FCC license application filings and their amendments)

ORBCOMM - The most recent information available indicates that the ORBCOMM constellation will consist of 28 satellites unless there is sufficient demand to place another 8 satellites into another plane.

Assumptions and Definitions Underlying the Analyses

1. Downlink availability is defined as the percentage of total time one or more satellites are in view of a ground location to allow the sending or receiving of information.

2. Separate Downlink availability analyses were conducted for each constellation examined using 10-degree and 15-degree mask angles (sometimes referred to as ground elevation angles). Autometric, Inc. agreed with Leo One USA's assessment of not analyzing constellations' downlink availability at mask angles less than 10 degrees due to many factors, including: significant propagation impairments at low elevation angles such as tropospheric and ionospheric effects, multi-path, blockage and shadowing; multi-path fades due to forward scattering from rolling terrain; terrain or man-made structure blockage; and vegetation path diffraction and surface-wave mode effects.

3. The satellite element set Epoch time used for this study was Day 366/1996 (Dec 31, 1996) at 00:00:00. Simulations began on Day 1/1997 (Jan 1, 1997) at 00:00:00 and were run for 72 hours. This period of time was used to ensure that no single "overly optimistic" 24 hour period would be inadvertently chosen for examination.

4. Downlink availability analyses were performed using ground sites placed along a single line of longitude. They were located along Longitude 100W and Latitudes from 0 to 89.9N incremented by 2 degrees. *Note: It was not necessary to choose sites south of the equator since the majority of the satellites in the examined constellations were in circular orbits and symmetric about the equator. It was also not necessary to choose points at different longitudes because the satellite ground tracks regress due to the Earth's rotation. This means that two locations separated by longitude, on the same line of latitude, will have the same percentage of continuous downlink availability. The actual times of downlink availability may be different, but if one location is available for downlink 95 percent of the time, the other location will also be available for downlink 95 percent of the time.*

5. Each constellation was assumed to have a store and forward capability, enabling best case downlink availability comparisons to be made between examined constellations.

6. Downlink availability reported in this study is derived strictly from geometric considerations and does not account for possible RF attenuation.

7. When comparing results with other studies, it is important to note that the Omni visualization tool uses the most conservative approach for downlink availability durations, and hence provides the most pessimistic prediction of non-availability times as shown:
Note: As illustrated above, although an initial downlink availability actually occurred somewhere between 40 and 43 minutes, the availability duration is reported by Omni, using 1 minute time steps, as 1 minute (lasting from 41 to 42 minutes). Similarly, the second downlink availability illustrated, occurring between 44 and 48 minutes would be calculated as a 2 minute downlink availability. The non-availability time between the two downlink availability opportunities illustrated would be reported as 3 minutes, occurring between 42 and 45 minutes.

APPENDIX C

APPENDIX C

LEO ONE USA TIME SHARING ANALYSIS

APPENDIX C

NVNG MSS Timesharing Analysis Summary

The Autometric study commissioned by FACS was performed without consideration of means for avoiding service outages when timesharing with NOAA satellites[1]. Considerable improvement in availability of service is achieved with the incorporation of frequency hopping. Leo One USA has conducted an analysis based on the FACS filing incorporating frequency hopping[2]. It is shown here that FAC's System *initially achieves 100 percent* of its availability design goal, *achieves 97% of its design goal during worst case transitional band sharing* with NOAA, and *ends up with 100%* of its design goal once the NOAA ATP (or TIP) channels become exclusively available. Further, if only two METSATs are operational in each band during the transition period, FACS achieves 100% of its availability design goal at all times. Figure 1 summarizes these findings below.

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[1] Leo One USA has proposed a band plan that optimizes the use of spectrum available for licensing. *See* Comments of Leo One USA at Appendix F. The Leo One USA proposed "System B" incorporates timesharing with the NOAA satellites.

[2] The Study commissioned by FACS uses the FACS constellation as filed, excepting the 2 polar orbiting satellites, and refers to it as TYPSAT. Leo One USA uses the same constellation and includes the FACS polar satellites for an even more conservative analysis.